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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/856,843      | 05/25/2001  | Wolfgang Gebhardt    | 785.39987X00        | 4753             |

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EXAMINER

KWOK, HELEN C

ART UNIT PAPER NUMBER

2856

DATE MAILED: 09/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/856,843

Applicant(s)

GEBHARDT ET AL.

Examiner

Helen C. Kwok

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 November 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 14-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 25 November 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

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## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 14-42 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 14, line 2, the phrase "the closed body" should be changed to -- the closed volume -- to provide proper antecedent basis. In line 6, the phrase "the at least one ultrasonic-wave generating unit" lacks antecedent basis. In line 7, the phrase "the one ultrasonic" should be changed to -- the one ultrasonic-wave -- to provide proper antecedent basis.

In claim 15, line 2, the phrase "the ultrasonic transducer" lack antecedent basis. In line 3, the phrase "the opening" is vague. Which opening is being referred to, the first opening or the second opening?

In claim 36, lines 2-3, the phrase "the ultrasonic transducer" lacks antecedent basis.

In claim 41, line 1, the phrase "the transducer" lacks antecedent basis.

In claim 42, there is no support in the disclosure for the solid body is a biological tissue.

Please clarify and provide where this is supported in the specification.

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***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 14-28 and 41-42 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 4,944,186 (Dorr).

With regards to claims 14-28 and 41-42, Dorr discloses an ultrasonic measuring system comprising, as illustrated in Figures 1-6, at least one ultrasonic-wave transducer unit UT (a transducer that includes a transmitter and a receiver) which couples ultrasonic waves into a solid body HI via a coupling medium (i.e. pressurized gas) provided between the transducer unit and a boundary surface (i.e. the surface of the solid body is considered the boundary surface) wherein the ultrasonic waves generated by the transducer unit UT are being directed into a closed volume having a first opening (the opening where a compressed air line supplies a source of air 20 thru) and a second opening (the opening where air and the ultrasonic waves passes through); a flow of gas 20 (i.e. compressed air) is directed into an interior of the closed volume through the first opening and exits through the second opening which is directly facing the boundary surface. Furthermore, the closed volume is bordered by a housing (i.e. chamber 24) in which the

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transducer unit UT is contained within the housing to direct the ultrasonic waves to the opening directly facing the boundary surface. (See, column 2, line 65 to column 4, line 58).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 29-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 4,944,186 (Dorr) in view of U.S. Patent 4,787,407 (Vogel).

With regards to claims 29-36, Dorr does not teach a sound-conducting means in a funnel-shaped for propagating the flow of gas without interferences. Vogel discloses an apparatus comprising, as illustrated in the figure, a sound-conducting means (i.e. a mirror) to couple the ultrasonic waves in the flow within a cylindrical circulator 5 to guide the coupling medium past the transducer unit 1. (See, column 2, lines 9-26; column 3, lines 7-22). It would have been obvious to an artisan in the art to have readily recognize the advantages and desirability to employ a sound-conducting means as suggested by Vogel to the apparatus of Dorr to couple and direct the ultrasonic waves along the coupling medium such that the ultrasonic waves is directed to the medium without having any interferences to provide a better and enhanced ultrasonic

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waves to the medium. Furthermore, it is well known in the art to include some type of sound-conducting means to prevent the ultrasonic waves from interferences so that better ultrasonic waves are obtained for measurements.

With regards to claims 37-40, Dorr further suggests the flow of gas extends radially relative to the second opening and the a gas cushion of a thickness is created between the housing and the boundary surface are in equilibrium. (See, column 4, lines 19-47).

#### ***Response to Amendment***

7. Applicant's arguments with respect to claims 14-42 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

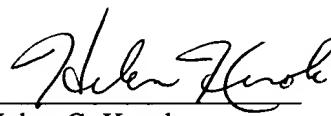
Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR

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1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen Kwok whose telephone number is (703) 308-8149.

  
Helen C. Kwok  
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hck  
September 16, 2003